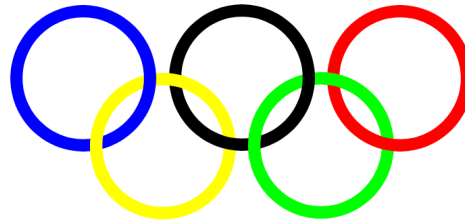


# COLLAPSED ATHLETE



Womack Army Medical Center  
Family Medicine - Sports Medicine

Chris Pappas, MD Attending

Lisa M. Harris, DO PGY-3

Michael Rossi, MD PGY-3

Chase Grames, DO PGY-2

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# MARINE CORPS MARATHON

OCTOBER 25, 2009

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## WASHINGTON, D.C.



***"THE PEOPLE'S  
MARATHON"***



# MARINE CORPS MARATHON

## VITAL STATISTICS

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- ▣ Marathon – 26.2 miles
  - ▣ 30,000 registered ▣ 21,000 completed
  - ▣ Minimum 14:00 min/mile pace
- ▣ 10 K – 6.2 miles
- ▣ 10 Aid Stations – 8 throughout course and 2 at the finish line.
  - ▣ DOD Level 1 (BLS-level) care—no ACLS meds.

# AID STATION

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# AID STATION

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# MARINE CORP MARATHON SYMPOSIUM ALGORITHM (LAST UPDATED 2007)

Francis G. O'Connor, MD, FACSM  
*Medical Director, Consortium for Health  
And Military Performance (CHAMP)  
Associate Professor of Military and Emergency Medicine  
Uniformed Services University of the Health Sciences*

Bruce Adams, MD  
*Medical Director, Marine Corps Marathon  
Director, Sports Medicine  
Naval Medical Clinic, Quantico, VA*

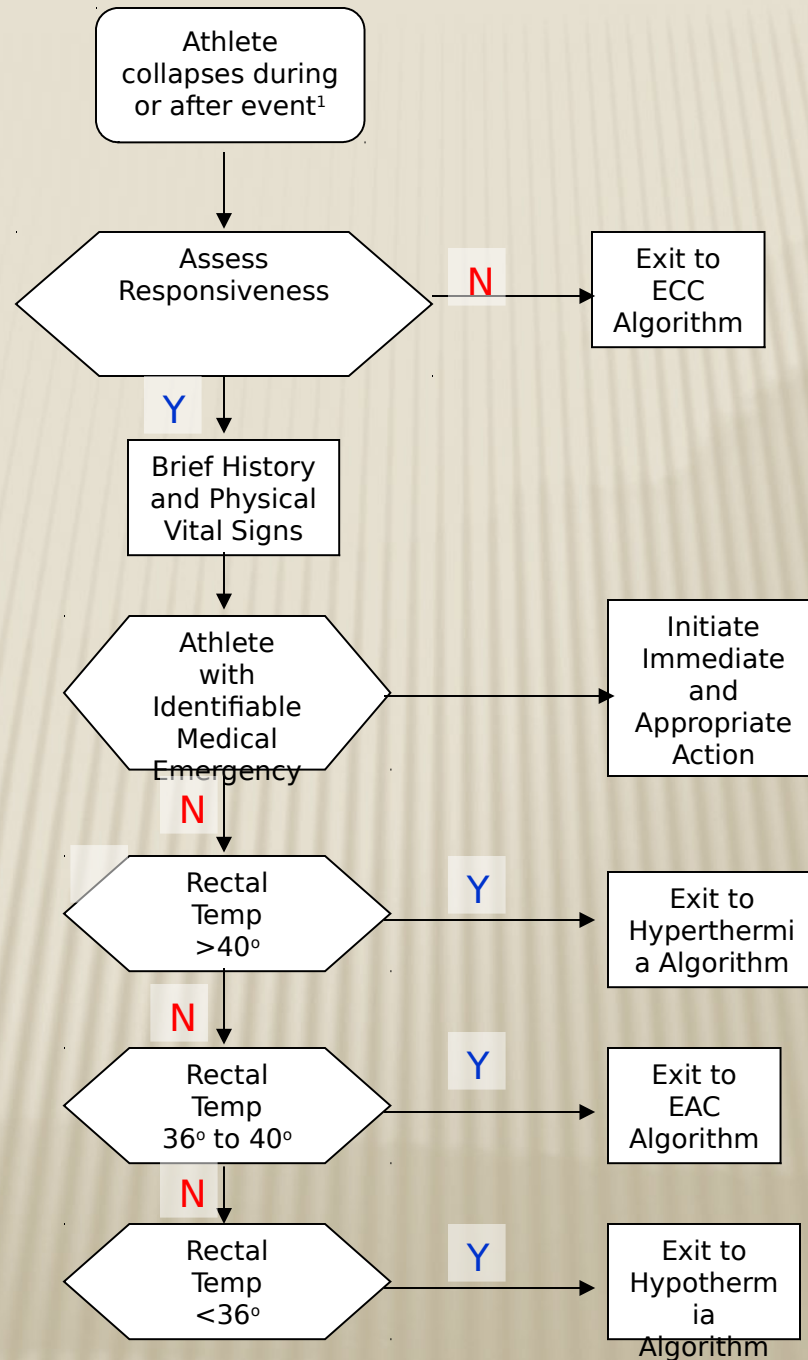
Scott Pyne, MD  
*Former Medical Director, Marine Corps Marathon  
Director, Sports Medicine  
US Naval Academy, MD*

Fred Brennan, DO  
*Director, Sports Medicine Clinic  
Seacoast Orthopedics and Sports Medicine  
Durham, New Hampshire*

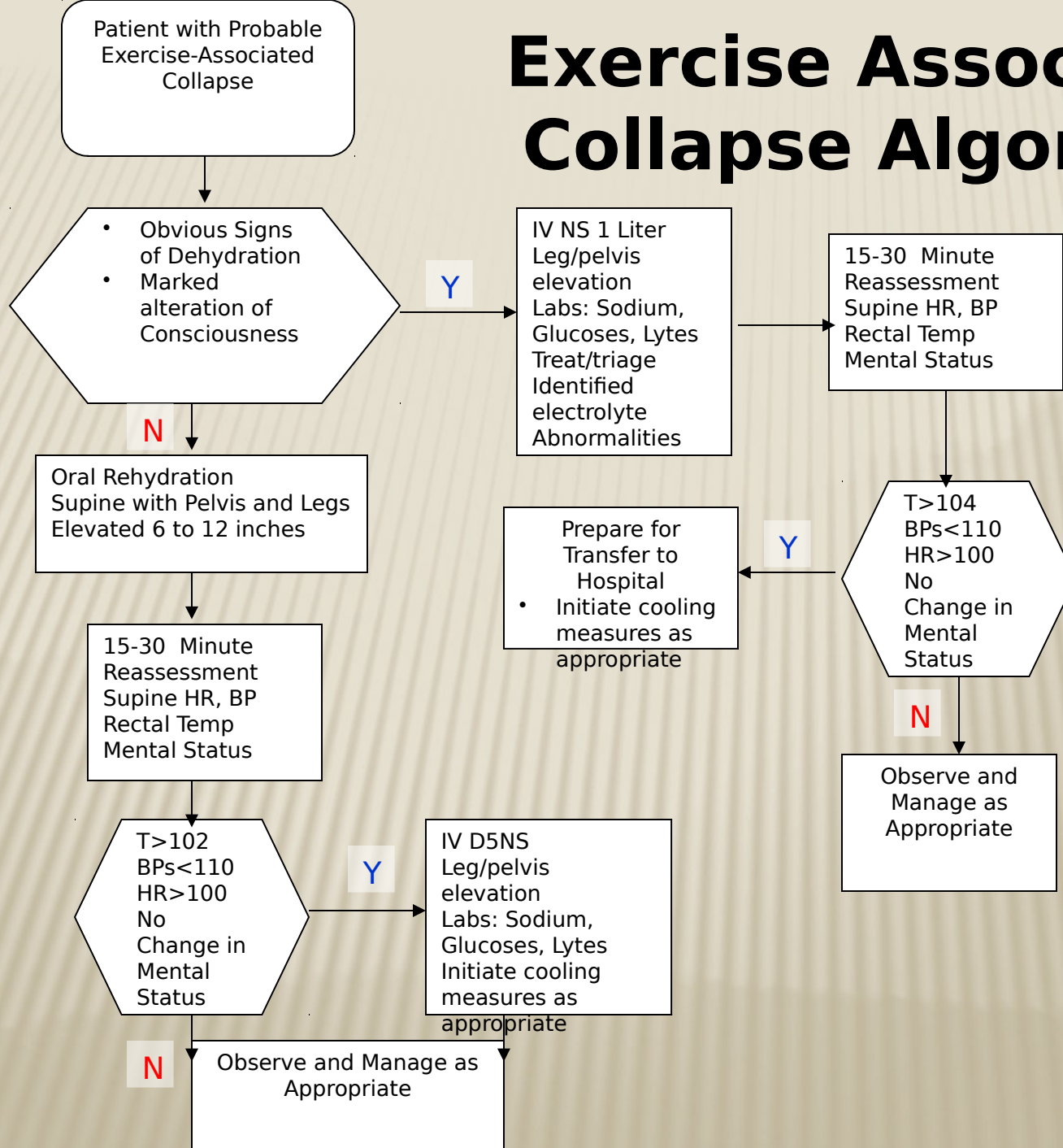
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# The Collapsed Athlete Algorithm

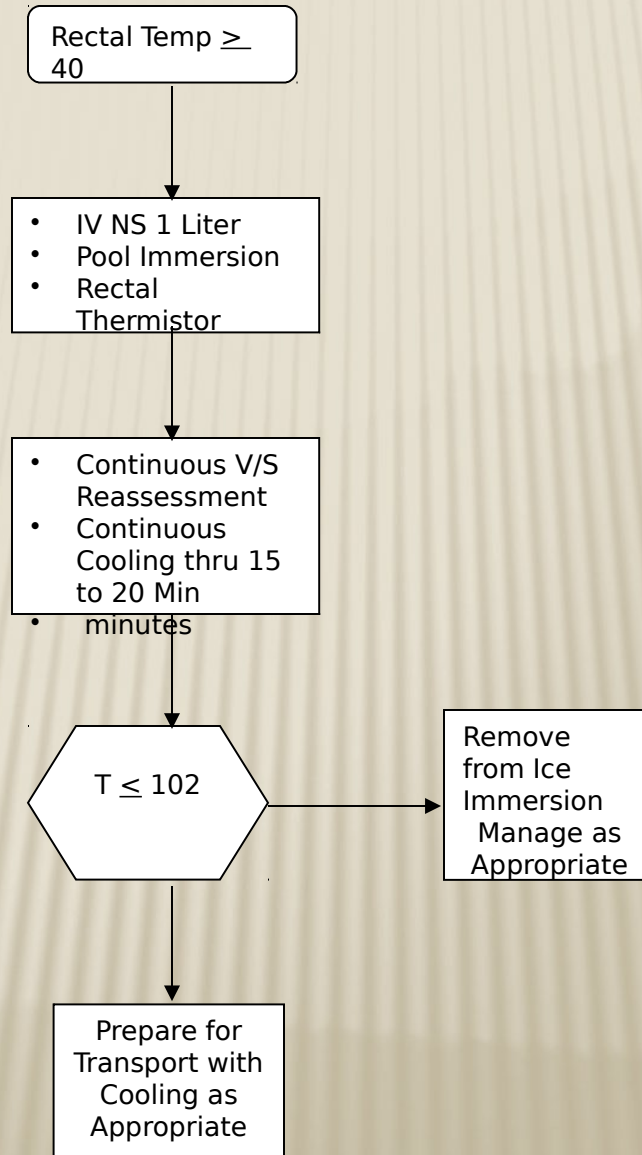


# Exercise Associated Collapse Algorithm





# Heat Illness Algorithm



# MCM: CASE 1

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- 40 y/o Female that finished the race, stumbles and falls on to your cot and says:

“My husband is a physician, I need an IV!”

- What do you do?







# MCM CASE 1

---

## ***Exercise Associated Collapse***

- ▢ Obvious Signs of dehydration
  - ▢ No salt stains on shirt
  - ▢ 2 sec cap refill
  - ▢ Mucous membranes are moist
- ▢ Marked Alteration of Consciousness
  - ▢ Answers all questions appropriately



# MCM CASE 1: EXERCISE ASSOCIATED COLLAPSE

- ▣ Oral rehydration
  - ▣ H2O, Gatorade, Broth, Crackers, Banana
- ▣ Elevation
  - ▣ Patient supine with pelvis and legs elevated 12-24 inches above the heart/chest
- ▣ Reassess in 15-20 minutes
  - ▣ stable



# MCM: CASE 2

---

- ▮ 26 yo Female brought in by stretcher and dropped at your station.
- ▮ What do you do?





He's  
a  
stud!

# MCM CASE 2: COLLAPSED ATHLETE ALGORITHM

- ▮ Assess Responsiveness
  - ▮ Knows her name, where she is
  - ▮ She finished the 10K run
- ▮ Brief History and Physical
  - ▮ No medical problems – However....  
*“This happened to me during my last race”*
  - ▮ Mental Status
    - ▮ Laying on the cot, her eyes keep closing as if she is tired, and opens them when you ask her questions
    - ▮ When asked how old she was, she couldn't remember
- ▮ Vitals







# RAPID COOLING ICE WATER IMMERSION

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## RAPID COOLING ICE WATER IMMERSION



# MCM CASE 2: HYPERTHERMIA

- ▣ Continuous rectal temp via rectal probe
- ▣ Start IV
- ▣ Temp below 102 after 15 minutes
  - ▣ Remove patient from ice bath to prevent overshooting and secondary risk of hypothermia



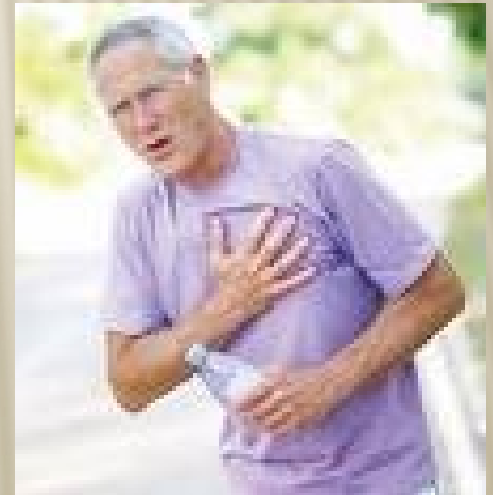




# MCM CASE 3

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- ▮ 54 y/o male comes in to the tent after finishing the race in 5hrs 10 min, complaining of chest pain.
- ▮ What do you do?



# MCM CASE 3: CHEST PAIN

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- History and Physical

- Medical History

- MI with stent placement 3 years ago

- “This chest pain feels just like when I had my heart attack”*

- 12 lead EKG

- Oxygen

- ASA

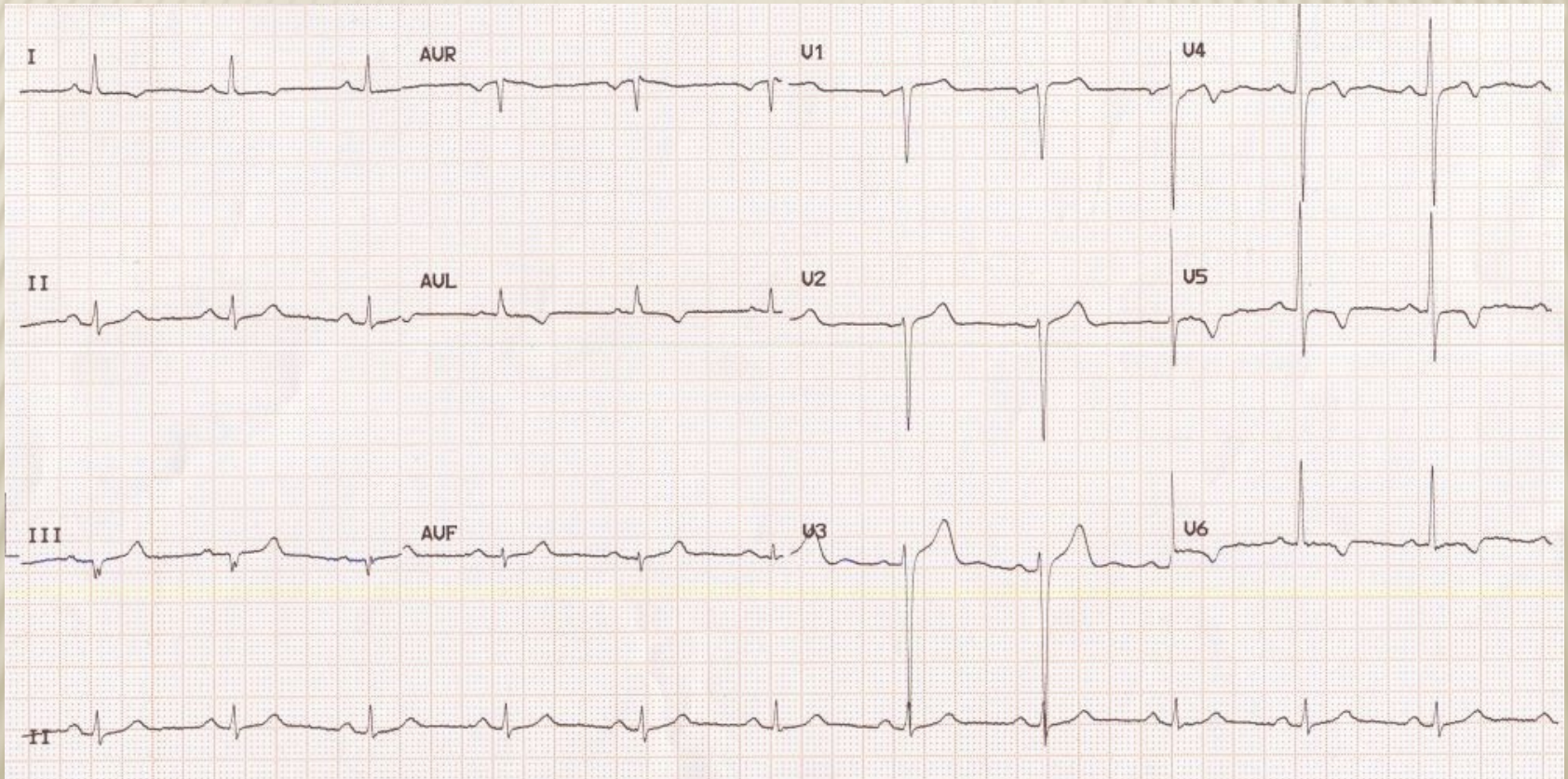
- SL Nitroglycerin

- IV Access



# 12 LEAD EKG

**Intern- please read**



What do you do?

# EMERGENCY ROOM □ TRANSPORT!





# MCM CASE 4

---

- ▮ 23 y/o Female finished the marathon in under 5 hours, brought in by stretcher and had passed out at the finish line.
- ▮ What do you do?

# MCM CASE 4: COLLAPSED ATHLETE

## ▮ Assess Responsiveness

- ▮ Answers questions appropriately, but she wants to leave, doesn't want to be assessed.

## ▮ Brief History and Physical

- ▮ No medical problems
- ▮ "Boyfriend" is in law school, he won't leave her side
- ▮ Policeman had to restrain him!

## ▮ Vitals

- ▮ When vitals are taken and rectal temp  
*Patient becomes COMBATIVE !!*



# RAPID COOLING ICE WATER IMMERSION

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# RAPID COOLING ICE WATER IMMERSION

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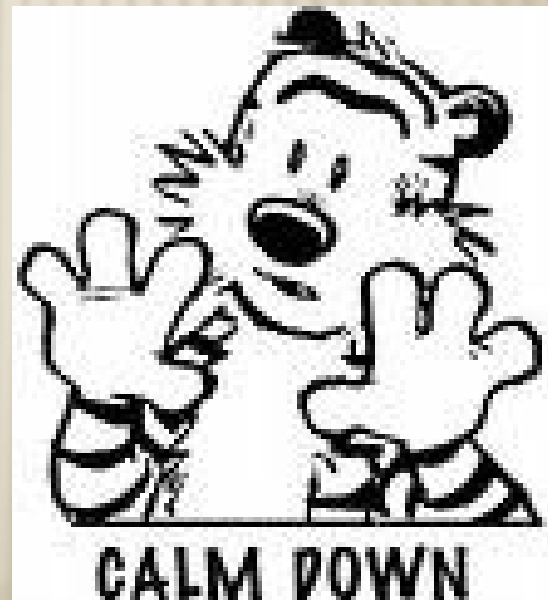


Dr. deWeber  
Primary Care Sports Medicine  
Fellowship Director

"The Great  
White  
Hunter"



- 
- Once core temp was below 106 she calmed down



# MCM: CASE 5

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- ▮ 22 y/o Female that walks in covered in bloody stool.
- ▮ What do you do?



# BLOODY STOOL

---



# MCM: CASE 5

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- ▮ Assess Responsiveness

- ▮ Answers questions appropriately

- ▮ Trying to qualify for Boston Marathon (she did)
    - ▮ Naval Academy Sophomore

- ▮ Brief History and Physical

- ▮ Recent PRK surgery 3 weeks ago.

- ▮ Medications: Motrin 800 mg TID since the surgery.

- ▮ Vitals

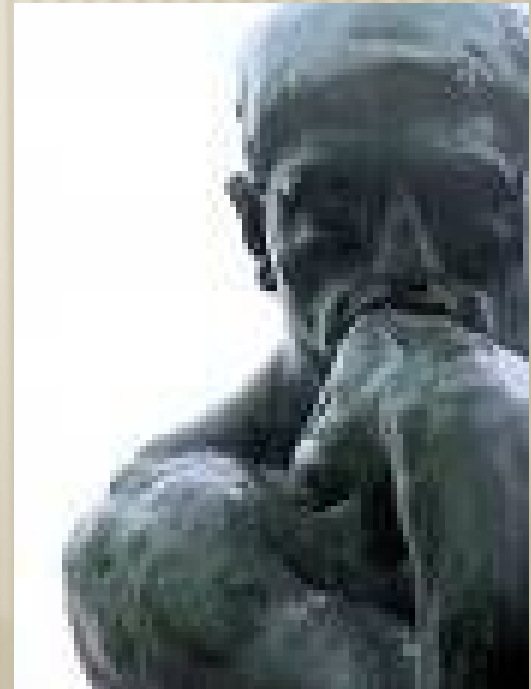
- ▮ Stable



# MCM: CASE 5

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What do you think?



# ISCHEMIC COLITIS ?

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# MARINE CORPS MARATHON

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